

**Notice of Allowability**

Application No.

10/615,013

Examiner

Satya B. Sastri

Applicant(s)

HIRAIDE ET AL.

Art Unit

1713

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to November 18, 2005.
2. ☒ The allowed claim(s) is/are 1-26.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 12/13/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

***EXAMINER'S COMMENT/REASONS FOR ALLOWANCE***

1. All previous rejections have been overcome by the amendment filed November 18, 2005 and the rejections are withdrawn. ***Claims 1-26*** are now pending in the application.

2. The terminal disclaimer filed on November 18, 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of Application No. 10/621,680 has been reviewed and is accepted. The terminal disclaimer has been recorded.

***Reasons For Allowance***

3. ***Claims 1-26*** are allowed.

4. The following is an Examiner's Statement of Reasons for Allowance:

The instant claims are allowable over prior art to JP 06105901 A ('091), JP 05277174 A ('174), Deibig et al. (US 4,912,021) and Tomonaga et al. (US 4,222,128).

The present claims are directed to a composite body obtained by pressing a calcium phosphate block, calcium phosphate particles, and synthetic resin particles, which is at least partially crosslinked in advance and uncrosslinked synthetic resin particles.

The prior art disclosed in '901 and '174 concern bioimplantation material based on particles of calcium phosphate particles and cross-linked and uncross-linked chitin, and calcium phosphate particles and cross-linked and uncross-linked gelatin. Neither art teaches or suggests

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the composite bodies produced from calcium phosphate particles with synthetic resins that are uncrosslinked as well as partially crosslinked in advance.

Deibig et al. concern bone replacement material obtained from sintered calcium phosphates with low or high molecular wt. synthetic organic substances. Suitable biodegradable polymers disclosed include synthetic polymerizates such as cyanoacrylates, polyglycolides, polylactides, crosslinked polymers of the same. However, there is no teaching or suggestion to the use of partially crosslinked synthetic resin as well as an uncrosslinked synthetic material to produce bone replacement material.

The prior art to Tomonaga et al. is in regard to composite implant materials comprising a sintered apatite material and a thermoplastic or thermosetting resin. The implant material is prepared from a sintered apatite material by impregnating a thermoplastic or a thermosetting resin into the pores or holes of the sintered apatite material. The exemplified resins include PMMA, polyester, polyurethane, epoxy resins etc. However, the prior art does not teach or suggest composite bodies produced by pressing sintered apatite material with a partially crosslinked synthetic resin as well as an uncrosslinked synthetic material as claimed instantly.

Therefore, the instantly claimed invention is deemed allowable over closest prior art of record as per said art neither anticipating nor rendering, alone or in combination, the instantly claimed invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance.

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*Future Correspondence*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satya Sastri whose telephone number is 571-272-1112.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273 8300 for regular communications. The unofficial direct fax phone number to the Examiner's desk is 571-273-1112.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SATYA SASTRI

January 10, 2006



DAVID W. WU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700